Abridged Vita

W. ED. WHITELAW

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President

Professor

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Department of Economics

ADDRESS 99 West 10th, Suite 400

University of Oregon

Eugene, Oregon 97401

Eugene, Oregon 97403

(541) 687-0051

(541) 346-4661

whitelaw@eugene.econw.com

EDUCATION

Ph.D., Economics, Massachusetts Institute of Technology, 1968

B.A., Mathematics, Political Science, Economics, University of Montana, 1963

EMPLOYMENT

1981- 1974-	Professor, Department of Economics, University of Oregon President, ECONorthwest
1987-90	President, Economic Policy Institute Northwest (EPI)
1974-75	Staff Economist, Oregon Coastal Conservation and Development Commission
1970-81	Associate Professor, Department of Economics, University of Oregon
1970-71	Visiting Research Fellow, Director of Urban Studies, Institute for Development
	Studies, University of Nairobi, Nairobi, Kenya (financed by the University
	Development Program, Rockefeller Foundation)
1970-71	Chief Economist, Nairobi Urban Study (financed by the Nairobi City Council, Kenya
	Ministry of Finance and Economic Planning, and the United Nations Development
	Program)
1967-70	Assistant Professor, Department of Economics, University of Oregon
1967-70	Research Associate, Bureau of Governmental Research, University of Oregon

HONORS, FELLOWSHIPS AND SCHOLARSHIPS

University of Montana

High Honors

Pi Mu Epsilon, Mathematics Honorary

Phi Kappa Phi, Scholastic Honorary

MIT

Woodrow Wilson Fellowship, 1963-65

MIT Graduate Fellowship, 1965-66

Graduate Fellow, Economic Development Administration Summer Institute,

Williamstown, Massachusetts, 1966

Harvard University

Dissertation Scholarship, Harvard Program on Regional and Urban Economics, 1966-67

University of Oregon

Ersted Award for Outstanding Teaching, 1970

TECHNICAL ADVISORY AND EDITORIAL POSITIONS

1998-	Goal 5 Regional Resources for Fish and Wildlife Habitat Protection Peer Review
	Committee, Portland Metro
1991-	Eugene Register Guard, Board of Economists
1989-	Oregon Progress Board, State of Oregon
1995-98	Environmental Protection Agency, National Advisory Council for Environmental
	Policy and Technology
1987-92	Pacific Northwest Executive, Forecast Panel
1988-90	Board of Advisors, Northwest Policy Center, Seattle, Washington
1980-90	Board of Directors, Pacific Northwest Regional Economic Conference
1987-89	Economic Development Commission, State of Oregon
1986-87	Board of Directors, Eugene-Springfield Metropolitan Partnership
1984-86	Portland Business Journal, Board of Economists
1979-86	Head, Real Estate Research Committee, Eugene-Springfield
1972-86	Editorial Committee, The Annals of Regional Science
1984-85	Oregonian, Business Forecast Panel
1984-85	Demand Forecasting Advisory Committee, Northwest Power Planning Council
1981-83	Scientific and Statistical Advisory Committee, Northwest Power Planning Council
1980-82	Governor's Council of Economic Advisors, State of Oregon
1980	Water Resources Division, Department of Natural Resources and Conservation,
	State of Montana
1979-80	Employment and Training Division, Department of Labor and Industry, State of
	Montana
1977-78	Advisory Committee on Economic Decline and Fiscal Stress in Cities, President's
	Domestic Council
1977-78	Task Force on Local Economic Planning, Oregon Department of Economic
	Development
1976-77	Advisory Committee, National Science Foundation Project on Onshore Impacts of
	Offshore Oil and Gas Exploration and Development
1972-75	Citizens' Advisory Committee on Transportation Planning, Lane Council of
	Governments, Lane County, Oregon
1972-74	Planning Committee, University Consortium on Transportation, Oregon
	Department of Transportation

PUBLICATIONS

Subject to Formal Peer Review

- An Analytic Typology for Examining the Economic Effects of Ecosystem Management.
 University of Michigan, School of Public Policy. Working Paper #407. With Paul Courant and Ernie Niemi. 1997.
- Water Management Study: Upper Rio Grande River Basin. Western Water Policy Review Advisory Commission. June 1997.
- Assessing Economic Tradeoffs in Forest Management. U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. General Technical Report. PNW-GTR-403. With Ernie Niemi. 1997. 1999 (revised).
- A Method for Estimating the Economic Effects of Habitat Protection. Portland Oregon: U.S. Fish & Wildlife Service. With Ernest G. Niemi. 1993. January 1994 Final.

- The Potential Social and Economic Impacts of Long Rotation Timber Management. Portland, Oregon: U.S. Forest Service, Pacific Northwest Research Station. With Ernest G. Niemi. May 1993.
- Pacific Northwest Forest-Policy Baselines. Washington, D.C.: The Wilderness Society. With Ernest G. Niemi. April 1993.
- "New Conflicts Stir Managers of U.S. Forests." Forum For Applied Research and Public Policy, Volume 6 (3). University of Tennessee, and Oak Ridge National Laboratory With Ernest G. Niemi and Rob Mendelsohn. 1992.
- Transition Strategies for Timber-Dependent Communities. Washington, D.C.: The Wilderness Society. With Ernest G. Niemi and Carl Batten. 1990.
- New Perspectives and the Forest Service: A New Way of Thinking. Washington, DC: U.S. Forest Service. With Niemi, Ernest G. and Robert Mendelsohn. 1990.
- "Oregon's Strategic Economic Choices." In LuAnna McCann (Ed.), *Oregon Policy Choices*.

 University of Oregon Bureau of Governmental Research and Service. With Ernest G. Niemi. 1989.
- The Economic Impact of Proposed Changes in Washington State Forest Practices Rules.

 Olympia: Washington State Department of Natural Resources. With Robin Gregory. 1987.
- Generic Coal Study: Qualification and Valuation of Environmental Impacts. Portland: U.S. Department of Energy, Bonneville Power Administration. With Ernest G. Niemi. 1987.
- Economic Analysis of the Environmental Effects of a Combustion-Turbine Generating Station. Portland: U.S. Department of Energy, Bonneville Power Administration. With Robert Mendelsohn and Ernest Niemi. 1984.
- Economic Analysis of the Environmental Effects of a Coal-Fired Electric Generator. Portland: U.S. Department of Energy, Bonneville Power Administration. With Robert Mendelsohn and Ernest Niemi. 1983.
- Review of Methodologies for Assessing the Environmental Costs and Benefits of Acquisitions.

 Benefit-Cost Analysis and Environmental Impacts: A Review of the Literature and an
 Evaluation of Methodologies. Review of Methodologies for Assessing the Environmental
 Cost and Benefits of Acquisitions. Portland: U.S. Department of Energy, Bonneville Power
 Administration. With Julia M. Friedman and Ernest Niemi. 1981.
- "Measuring the Effects of Public Policies on the Price of Urban Land". In J. Thomas Black and James E. Hoben (Ed.), *Urban Land Markets: Price Indices, Supply Measures, and Public Policy Effects*. Washington, DC: Urban Land Institute, 1980.
- "Urban-Rural Income Transfers in Kenya: An Estimated Remittances Function." *Economic Development and Cultural Change* 22(3). With George E. Johnson. 1974.

Not Subject to Formal Peer Review

- "Bridge Over Troubled Water." Oregon Quarterly. Whitelaw E. and E. Niemi. Winter 2001.
- Coping with Competition for Water, Irrigation, Economic Growth, and the Ecosystem in the Upper Klamath Basin. Niemi, E., and A. Fifield, E. Whitelaw. November 2001.
- "Evaluating Takings and Measure 7." *Oregon's Future*. Whitelaw, E. and R. Pozdena, T. Moore, J. Tapogna, J. Ebenhoh. Spring 2001.

- Green Building: Saving Salmon, the Environment, and Money on the Path to Sustainability. Under a grant provided by: The Center for Watershed and Community Health, Mark O. Hatfield School of Government, Portland State University. 2000. ECONorthwest. 2000
- "Breaching Dam Myths." Oregon Quarterly. Whitelaw, E. Autumn 2000.
- "Bird Of Doom...Or Was It?" *The Amicus Journal*. Niemi, E., and E. Whitelaw, with Elizabeth Grossman. Fall 2000.
- Saving Salmon, Sustaining Prosperity, An Introductory Handbook and Reference for the Puget Sound Region and Washington. Under a grant provided by: The Center for Watershed and Community Health, Mark O. Hatfield School of Government, Portland State University. 2000.
- "Salmon and the Economy." Conservation Biology in Practice. Niemi, E. and E. Whitelaw. Spring 2000.
- Salmon, Timber and the Economy. Pacific Rivers Council, Oregon Trout, Audubon Society of Portland, and Institute for Fisheries Resources. Niemi, E. and E. Whitelaw, M. Gall, and A. Fifield. December 1999.
- The Economic Wellbeing of Michigan Bands of Native Americans. Michigan Department of Natural Resources. December 1999. (Confidential litigation product.)
- Salmon and the Economy, A Handbook for Understanding the Issues in Washington and Oregon.
 Under a Grant provided by: The Center for Watershed and Community Health, Mark O.
 Hatfield School of Government, Portland State University. ECONorthwest. November 1999.
- "Reforming Welfare Reform." Oregon Quarterly. Tapogna, J. and E. Whitelaw. Autumn 1999.
- An Economic Strategy for the Lower Snake River. Trout Unlimited. With Ed MacMullan. November 1999.
- The Sky Did NOT Fall: The Pacific Northwest's Response to Logging Reductions. Earthlife Canada Foundation. Sierra Club of British Columbia. Niemi, E., E. Whitelaw, and A. Johnston. April 1999.
- The Ecosystem-Economy Relationship: Insights from Six Forested LTER Sites. National Science Foundation. Courant, P., E. Niemi, and E. Whitelaw. November 1997.
- "Costs and Benefits: Reflections of an Oregon Economist." Inquiry. November 21, 1997.
- "What Price Prisons?" Oregon Quarterly. Summer 1997.
- "Integrating Resource Conservation and Economic Development." With Paul Courant and Ernie Niemi. 1997.
- "New Economic Perspectives of Ecosystem Management: A Critique of Recent Efforts." May Submission to *Environmental Management*. With Paul Courant and Ernie Niemi. 1997.
- The Potential Economic Consequences of Designating Critical Habitat for the Rio Grande Silvery Minnow: Draft Report. U.S. Fish and Wildlife Service, New Mexico Ecological Services Field Office. ECONorthwest. With Ernie Niemi and Tom McGuckin. 1996.
- Economic Well-Being and Environmental Protection in the Pacific Northwest. Pacific Rivers Council. With Tom Power. 1996.

- Facing the Tradeoffs: Economic Development and Resource Conservation in Louisiana. ECONorthwest. With Ernie Niemi, Colleen Heflin and Allison Gorr. 1996.
- Pacific Northwest Regional Economic Elements Affected by Fish Hatchery Management Decisions. Columbia Basin Fish and Wildlife Foundation. 1996.
- The Potential Economic Consequences of Designating Critical Habitat for the Marbled Murrelet: Final Report. US Fish and Wildlife Service, Portland Field Office. With Ernie Niemi, Ed MacMullan and David Taylor. 1996.
- Economic Consequences of Management Strategies for the Columbia and Snake Rivers. With Ernie Niemi and Ed MacMullan. 1995.
- Economic Consequences of an Injunction to Protect Salmon Habitat on the Wallowa-Whitman and Umatilla National Forests: Preliminary Report. With Ernie Niemi and Ed MacMullan. 1995.
- "Putting Merit in the Matrix." Oregon Quarterly. Winter 1995.
- "Rich Oregonian, Poor Oregonian." Oregon Quarterly. Summer 1995.
- Integrating Economics and Resource-Conservation Strategies. With Ernie Niemi. June 1995
- The Columbia River and the Economy of the Pacific Northwest. With Ernie Niemi and Ed MacMullan. May 1995.
- "Dubious Theory About Economy Leads us Astray." The Register Guard. May 1995.
- "Oregon's Money Doesn't Just Grow on Trees." The Oregonian. April 1995.
- The Economic Consequences of Protecting Salmon Habitat in Idaho (Preliminary Report). With Ernie Niemi. Pacific Rivers Council. March 1995.
- The Full Economic Costs of Proposed Logging on Federal Lands. With Ernie Niemi. March 1995.
- "Other Lessons from the Northwest." Vermont Law Review. Volume 19, #2, Winter 1995.
- The Potential Economic Consequences of Critical-Habitat Designation for the Lost River Sucker and the Shortnose Sucker, Final Report. U.S. Fish and Wildlife Service. With Ernie Niemi. August 1995.
- The Potential Economic Consequences of a Reduction in Timber Supply from the Tongass National Forest. With Ed MacMullan. December 1994.
- "Swimming Upstream." Oregon Quarterly. Winter 1994.
- "School Dazed." Oregon Quarterly. Summer 1994.
- Economic Critique of the FSEIS on Management of Old-Growth Habitat. With Ernie Niemi. March 1994.
- "Guessing at the 'Hood: An Urban Future." Oregon Business. January 1994.
- "Growing Pains." Oregon Quarterly. University of Oregon, Eugene, Oregon. With Terry Moore. Spring 1994.
- Environmental Externalities and Utility Regulation. Washington, DC: National Association of Regulatory Utility Commissioners. With Ernest G. Niemi. September 1993.

- "After the Owl." Old Oregon. With Ernie Niemi. Winter 1993. Reprinted in the Seattle Post-Intelligencer as "Jobs & Nature," December 12, 1993.
- "Oregon's Real Economy." Old Oregon. Winter 1992. Reprinted in Eugene Register Guard.

 December 13, 1992, and through Oregon Business' datafax system, February 1993.
- "Payback Time." Old Oregon. Spring 1992.
- Investing in Dislocated Families. With Ernie Niemi. 1990.
- "A More Civil War." Old Oregon. With Ernest G. Niemi. Winter 1990.
- "Oregon's Turn: A Blueprint for Economic Growth in the 1990s." Old Oregon. Spring 1990.
- "A Log-Export Ban, Alone, Is Not Enough." Eugene Register-Guard. October 13, 1989.
 Reprinted in Portland Oregonian, Pacific Northwest International Trade Association
 Trade Winds, and various Oregon weeklies. With Ernest G. Niemi
- "Money: The Debt We Owe Ourselves." Old Oregon. With Ernest G. Niemi. Autumn 1989.
- "Plan Now For More Timber Industry Changes." Eugene Register-Guard. July 25, 1989. Also published in Portland Oregonian. With Ernest G. Niemi.
- "Looking Beyond the Owls and the Logs: A White Paper." Prepared for Governor Goldschmidt's statewide Timber Summit. With Ernest G. Niemi, June 1989.
- "Improving Oregon's Economy by Improving its Schools." Proceedings of the 23rd Annual Pacific Northwest Regional Economic Conference. With Ernest G. Niemi. June 1989.
- "Migration, Economic Growth, and the Quality of Life." Proceedings of the 23rd Annual Pacific Northwest Regional Economic Conference. With Ernest G. Niemi. June 1989.
- "The Greening of the Economy." Old Oregon. Spring 1989. Reprinted in Portland Oregonian (April 3, 1989), the Sierra Club Runoff (April 1989), and Forest Watch (April 1989). With Ernest G. Niemi.
- "The West, Garbage, and the American Dream." *Pacific Northwest Executive*. January 1989. With Ernest G. Niemi and Terry Moore.
- "Focusing the Northwest's Vision." Pacific Northwest Executive. With Ernest G. Niemi. 1988.
- "The Once and Future Northwest." Old Oregon. With Ernest G. Niemi. Autumn 1988.
- "Developing a Strategic Plan for Regional Economic Growth." Proceedings of the 22nd Annual Pacific Northwest Regional Economic Conference. June 1988.
- "Getting Controversial Public Facilities Built: How Can Economics Help?" Proceedings of the 22nd Annual Pacific Northwest Regional Economic Conference. With Terry Moore. June 1988.
- "Electricity Prices and Economic Development: Implications for the Pacific Northwest."

 Proceedings of the 22nd Annual Pacific Northwest Regional Economic Conference. With
 Ernest G. Niemi. June 1988.
- "Focusing the Northwest's Vision." *The Once and Future Northwest*. University of Washington Institute for Public Policy and Management, Northwest Policy Center. With Ernest G. Niemi. April 1988.

- Managing Old-Growth Forests in the PNW. With Ernie Niemi. 1987.
- "Strategic Economic Development for Oregon." *Governmental Notes*. Bureau of Governmental Research and Service, University of Oregon. December 1987.
- Accelerating Our Economic Development: Two Views. Olympia, WA: The Washington State Institute for Public Policy. With Thomas Tabasz. October 1987.
- "New Economic Strategies for Regional Development." Proceedings of the 21st Annual Pacific Northwest Regional Economic Conference. June 1987.
- "Local Economy Slipped During the 1980s, Teachers Kept Ahead of Inflation." Eugene Register-Guard. With Ernest G. Niemi. May 5, 1987.
- "Investing in Oregon's Interests: Oregon Using Wrong Strategies." Eugene Register-Guard. January 27, 1987.
- "The Once and Future Northwest." Pacific Northwest Executive, 2(3). July 1986.
- "Smokestack Memories: The Future in Our Past." Visions. The Oregon Graduate Center. Spring 1986.
- "Economic Choices for the Future of Our Region." Old Oregon. University of Oregon Round Table. Autumn 1985.
- "More is More: Small Businesses Bring Diversity, Vigor to Economy." Portland *Oregonian*. June 16, 1985.
- "The Economy and the Student: Students need more training in analysis and expression." Eugene Register-Guard. May 22, 1984.
- "Rising Housing Starts Needed to Trigger Employment Drop: Local Economy May Stay Bad 'Til '84." Eugene *Register Guard*. February 23, 1984.
- Analysis and Forecasts of the Demand for Rock Materials in Oregon, Oregon Department of Geology and Mineral Industries, Special Paper 5. With J.M. Friedman, E. Niemi. 1979.
- Rural-Urban Relations, Low-Income Settlements, Intra-Urban Mobility and the Spatial Distribution of Households in Nairobi, Kenya. Working papers in Economics No. 6. Eugene: University of Oregon, Department of Economics. 1974.
- Nairobi Household Survey: Description of the Methodology and Guide to the Data. Discussion paper No. 116. Nairobi: University of Nairobi, Institute for Development Studies. 1971.
- Nairobi Household Survey: Some Preliminary Results. Staff paper 117. Nairobi: University of Nairobi, Institute for Development Studies. 1971.
- The Employment and Income History of a House Servant in Nairobi 24. Staff paper 116. Nairobi: University of Nairobi, Institute for Development Studies. 1971.
- The Objectives and Tasks of the Economics Group for the Urban Studies of Nairobi. Staff paper 84. Nairobi: University of Nairobi, Institute for Development Studies. 1970.
- Interstate Comparisons of State and Local Revenues and Expenditures. Eugene: University of Oregon, Bureau of Governmental Research. 1968.

CONSULTING PROJECTS

- For Public Interest Projects, a non-profit organization, ECO examined the competition for water in the Upper Klamath Basin, and the relationship between water and the economy. ECO also described strategic options for accommodating the growing competition for water, and recommended market mechanisms to help resolve these problems.
- Developed a mitigation plan for the potential negative economic consequences of bypassing four dams on the Lower Snake River. The plan also outlined alternatives for enhancing the positive economic consequences of the bypass. Trout Unlimited, 1999-2000.
- Initiated a multi-year effort to assess the economic costs and benefits of salmon conservation measures in the Pacific Northwest, and will offer policies to increase both the net benefits of salmon conservation and the probability that the region will accomplish its conservation goals. Center for Watershed and Community Health at Portland State University and Ford Foundation. 1998-ongoing.
- Evaluated the potential economic consequences of efforts to adjust Oregon forest practices to provide a high probability of protecting and restoring aquatic habitat on forestlands important for salmonids. Pacific Rivers Council. 1998-1999.
- Evaluated the economic consequences of ecosystem-management decisions in the upper Willamette River Basin, and how these consequences influence water and land use in the Eugene-Springfield area. Environmental Protection Agency. 1998-2000.
- Developing a method to estimate the sediment and flooding downstream costs of timber-production activities on the City of Salem. Environmental Protection Agency. 1997-ongoing.
- Analyzing the ecological, demographic and economic benefits and costs of watershed restoration as part of a multidisciplinary team, balancing ecological needs with social constraints on investments. Environmental Protection Agency. 1997-ongoing.
- Designing the analysis and estimating the economic causes and effects relevant to the dynamic ecological systems characterizing the Willamette River Basin in Oregon. Environmental Protection Agency. 1995-ongoing.
- Evaluated the economic impacts of bypassing four Federal dams on the Lower Snake River, and developed a plan to mitigate the negative consequences of the bypass. Trout Unlimited and Earth Justice. 1999.
- Critiqued a draft report by the U.S. Forest Service regarding the Demand for Timber in the Tongass Forest. Alaska Rainforest Campaign. 1999.
- Evaluated the economic consequences of new restrictions on Alaska's fishing industry. Earth Justice. 1999.
- Described the economy's response in the Pacific Northwest (Oregon & Washington) to dramatic reductions in logging that occurred during the 1980s and 1990s; described how the economy prospered and why it did so much better than the predictions; and compared the logging reductions in the Pacific Northwest to the projected reductions in British Columbia. BC Wild, Earthlife Canada Foundation, and the Sierra Club of British Columbia. 1998-1999.

- Analyzed the economic impacts of river and wetlands restoration in the Missouri River Basin, and prepared manual for assessing the socioeconomic impacts of ecological restoration projects for rivers and floodplains in the western U.S. Environmental Protection Agency. 1995-1997.
- Analyzed the relationship between the regional economy and natural resources of Louisiana by presenting workshops and developing an information base for local stakeholders. Ford Foundation and Louisiana State University. 1996-1997.
- Analyzed problems related to scarce water resources, environmental protection, economic development, tribal self-determination, public health and public land management in the Upper Rio Grande Basin, and recommended actions and federal policies to resolve these problems. Western Water Policy Review Advisory Commission. 1996-97.
- Conducted a three-year study to describe, explain and communicate the relationships of forested ecosystems and regional economies. National Science Foundation. 1994-1997.
- Developed the preliminary design of a study to assess the potential economic costs and benefits of mandatory medical monitoring of agricultural workers who load, mix, or apply the pesticide cholinesterase. Sierra Club Legal Defense Fund. 1996.
- Evaluated alternatives for reforestation of marginal agricultural lands in the Lower Mississippi Delta. Business Council for Sustainable Development. 1996.
- Analyzed the relationship between the regional economy and natural resources of Louisiana. W. Alton Jones Foundation. 1995-1996.
- Analyzed the environmental externalities associated with industrial activities affecting coastal and estuarine resources in Louisiana. W. Alton Jones Foundation. 1995-1996.
- Evaluated the role of natural resources and traditional extraction industries in the Pacific Northwest and how they influence future economic trends for individual communities. Pacific Northwest Economics Workshop, Pacific Rivers Council. 1995-1996.
- Conducted an economic analysis of the designation of critical habitat for the Rio Grande silvery minnow in the Rio Grande River Basin. The project includes a variety of issues related to water policy in the Rio Grande basin. U.S. Fish & Wildlife Service. 1994-1996. Conducted an economic analysis of the designation of critical habitat for the marbled murrelet in Oregon, Washington, and California. U.S. Fish & Wildlife Service. 1994-1996.
- Estimated the economic effects of the designation of critical habitat to support the recovery of two endangered fish in the Upper Klamath Basin. U.S. Fish and Wildlife Service. 1993-1996.
- Prepared a response to the Draft Environmental Impact Statement for the System Operation Review prepared by the federal water-management agencies for the Columbia River. Confederated Tribes of the Umatilla Indian Reservation. 1995.
- Analyzed the role of the Columbia River in the economy of the Pacific Northwest, and described an economic framework for analyzing the economic consequences of alternatives for managing the Columbia River. Northwest Water Law and Policy. 1995.
- Prepared a paper that demonstrated a common analytical framework for economic analysis to integrate resource-conservation and economic-development strategies. Ford Foundation Rural Poverty and Resources Program. 1995.

- Analyzed issues related to integrating economics and resource-conservation strategies. Ford Foundation. 1995.
- Analyzed the role of the Columbia River in the economy of the Pacific Northwest. Sierra Club Legal Defense Fund. 1995.
- Analyzed the economic principles applied to state water regulation, describing how historic and current water-regulatory policies violate these principles, and illustrating the economic costs that accrue to citizens. Bullitt Foundation and Water Watch. 1994-1995.
- Analyzed the relationship between the regional economy and natural resources of the Southern Appalachians. U.S. Forest Service. 1994-1995.
- Participated in economic analysis of eastside ecosystem management project (EEMP) to ensure that the processes and the products of the EEMP internalize the externalities of resource-extraction industries (timber, grazing, mining, and hydropower) on federal lands in eastern Oregon, eastern Washington, and Idaho. W. Alton Jones Foundation. 1994-1995.
- Evaluated the economic components of old-growth forests associated with spotted owls. The analysis included calculations illustrating the potential impact on employment of forest-management alternatives that would jeopardize the region's quality of life. Private client. 1994.
- Analyzed the economic impacts of curtailing grazing on public lands that support endangered salmon in eastern Oregon, eastern Washington, and Idaho. Pacific Rivers Council. 1994.
- Estimated the economic impacts and values associated with the public acquisition of private land for use as a wildlife habitat. The economic analysis included an analysis of economic values, an analysis of economic impacts, and an analysis of policy impacts. Washington Department of Wildlife. 1993.
- Analyzed the Pacific Northwest timber situation in the context of the laws passed by Congress, the actions of executive-branch agencies, and the rulings of the federal judiciary. Wilderness Society. 1993.
- Estimated the economic impact associated with a proposal to restrict logging in the Sequoia National Forest and to establish the Sequoia National Monument. Private client. 1993.
- Developed a method for assessing the economic effects of designating critical-habitat for threatened or endangered species. The method incorporates a multi-sector, dynamic approach that emphasizes the analysis of effects on non-habitat-degrading activities, quality of life, and cost of living. U.S. Fish & Wildlife Service. 1993.
- Integrated the results from past studies into a summary of the economic importance of the salmonid fishery in the Pacific Northwest. Pacific Rivers Council. 1993.
- Assisted with the design and conducted an economic evaluation of the PRC's Restoration Initiatives, a series of demonstration projects designed to rehabilitate degraded watersheds. Pacific Rivers Council. 1993.
- Described the theoretical issues underlying efforts by state commissions to introduce environmental externalities into the regulatory process, the procedural opportunities for doing so, and the practical lessons from case studies of six states. National Association of Regulatory Utility Commissioners. 1992-93.
- Analyzed the social implications of managing the federal forests in the Douglas-fir regions on longer rotations, including aesthetics, value added, tourism, jobs (quantity and type),

- changes in recreational opportunities, and economic and community sustainability. U.S. Forest Service. 1992.
- Developed the preliminary study design for using contingent-valuation methods to estimate the value of environmental externalities from electrical generation and transmission. Bonneville Power Administration. 1992.
- Developed and evaluated alternative approaches for ensuring that the activities of state and federal agencies are consistent with Oregon's Strategic Plan. Oregon Economic Development Department. 1992.
- Evaluated adjustments applied to the economic costs of alternative energy resources to account for environmental externalities in PGE's least cost planning effort. Portland General Electric. 1992.
- Providing the Tri-County Metropolitan Transportation District in Portland with quarterly forecasts of its payroll-tax revenues, payments from the State of Oregon, the region's economic condition, employment by industry, income by source, the price of diesel fuel, and the consumer price index for urban wage earners. Tri-County Metropolitan Transportation District. 1981-92.
- Estimated the costs (equipment, resources, personnel) of responding to an off-shore oil spill within 24 hours. Private client. 1991-92.
- Designed and conducted research on the impacts of land use on Oregon's transportation systems and costs. Oregon Department of Transportation. 1991-1992.
- Developed a strategic plan for allocating state resources to assist dislocated workers and timber-dependent communities, and a set of legislative recommendations for implementing the plan. Oregon State Legislative Joint Committee on Forest Products Policy. 1990.
- Described the forces and factors that underlie the controversy surrounding the U.S. Forest Service's land-management program and outlined corrective actions. U.S. Forest Service. 1990.
- Analyzed the impact of the listing of the spotted owl as an endangered species for several public and private clients, including the City and School District of Eugene, Oregon, the Tri-County Metropolitan Transportation District in Portland, and electric utilities in the Eugene metropolitan area. 1990.
- Assessed the impacts of timber harvests with and without a change in forest management policy that would protect most or all of the remaining old-growth forest on federal lands in three timbersheds: Grays Harbor and Pacific Counties in Washington; Linn and Lane Counties in Oregon; and Siskiyou County in California. Wilderness Society. 1990.
- Assessed policies for redirecting growth from the Puget Sound region to other parts of the state, and policies for redirecting growth within the Puget Sound region. Puget Sound Council of Governments. 1990.
- Described the economic and environmental impacts of the Exxon Valdez oil spill on Alaska's communities. 1989-90.
- Analyzed the potential contribution to local and regional economic development of a proposed mixed-use development in downtown Eugene and the appropriateness of state support for required utility relocation. City of Eugene. 1989.

- Developed a method for setting fees for over 500 services Lane County provides. Lane County Finance and Management Services. 1987-88.
- Analyzed proposed economic evaluation procedures for allocating unappropriated water in the Snake River Basin, especially adapting to state and local policy the benefit-cost methodologies designed for federal decision-making. Idaho Office of the Governor, Division of Financial Management. 1985-88.
- Supervised and directed analysis of the economic costs and benefits of the Northwest Power Planning Council's Columbia River Basin Fish and Wildlife Program. Northwest Power Planning Council. 1988.
- Analyzed the economic feasibility of relocating the section of Interstate-5 between the Marquam and Fremont bridges in Portland. City of Portland Department of Transportation. 1988.
- Conducted an economic feasibility analysis of a proposed publicly owned cable-television system. Springfield Utility Board. 1987-88.
- Analyzed the economic impact of a plant closure in Dallas, Oregon and advised government officials on immediate mitigative solutions and on long-term economic development strategies. Mid-Valley Council of Governments. 1988.
- Analyzed the development of independently-owned small electricity generators operating under PURPA contracts in Oregon. Oregon Public Utility Commission. 1988.
- Analyzed the rate of absorption of industrial space in the Eugene-Springfield area since 1976. Eugene/Springfield Metropolitan Partnership. 1987-88.
- Evaluated several land-use options for vacant property in the Glenwood district of Eugene, Oregon. City of Eugene. 1987-88.
- Analyzed the likely effects of reopening part of Willamette Street to automobile traffic. City of Eugene. 1987-88.
- Led a team of economists and planners studying the economic and demographic aspects of a comprehensive and integrated assessment of the socioeconomic impacts of a proposed nuclear waste repository to be sited at Hanford, Washington. Impact Assessment Inc. and the Washington Department of Ecology. 1987.
- Analyzed the socioeconomic characteristics of Atlanta, Idaho and the likely impacts of a proposed open-pit gold-mine near Atlanta. Determined the dollar value of major costs and benefits. U.S. Forest Service. 1986-87.
- Analyzed the fiscal impacts of changes in timber-sale contracts including the fiscal and economic implications of alternative proposals for offering contractual relief to firms holding contracts for state-owned timber. Oregon Division of State Lands. 1987.
- Analyzed the impact of alternative wholesale power rates on irrigated agriculture and developed efficient rate mechanisms to enhance the viability of this industry. Northwest Irrigation Utilities. 1986-87.
- Evaluated the feasibility of constructing an 18-hole regulation-size golf course on a 210-acre parcel of land, and conducted a market analysis and a financial plan for construction and operation. Lane County, Oregon. 1987.

- Prepared baseline employment and income sections for the socioeconomic element of an environmental impact statement for the proposed Chartam gold and silver mine. A joint venture with Western Energy Corporation; private client. 1986-87.
- Evaluated environmental costs and benefits associated with emissions from one or more generic coal plants in the Pacific Northwest. Bonneville Power Administration. 1986-87.
- Reviewed the adequacy and accuracy of sensitivity analysis and expected utility analysis of proposed nuclear-waste repositories. Evaluated methods, range of variation in outcomes of performance criteria, and utility values for pre- and post-closure scenarios developed by the U.S. Department of Energy. Washington State Department of Ecology. 1986-87.
- Estimated the potential economic consequences of a ban on further harvest of old-growth timber from national forests in Western Oregon and Washington, and evaluated policies for mitigating potential adverse consequences. National Wildlife Federation. 1986.
- Supervised and managed studies on property in Beaverton and Tigard, Oregon, and identified the current and future needs for residentially-related commercial land within the study areas. Cities of Beaverton and Tigard. 1986.
- Analyzed the economic effects of proposed changes in the existing Forest Practices Rules for the State of Washington. State of Washington, Department of Natural Resources. 1986.
- Performed a feasibility study for the creation of a 300-seat convention center at a beach resort in Lincoln City, Oregon. Private client. 1986.
- Evaluated and proposed zone changes for the City of Troutdale based on an analysis of market conditions, land characteristics, the goals of the comprehensive plan, and the land owners' plans for current and future use of the property. City of Troutdale. 1986.
- Analyzed the general economy, recommended strategies for improvement, and prepared a report summarizing the Forest Service's preliminary decision to retain its regional headquarters in Challis. North Custer Resource and Development Committee. 1985-86.
- Evaluated cost information on landfills for solid waste to develop a computer model to estimate the economic value of environmental costs that accompany the construction, operation, and decommissioning of a land-fill. Oregon Department of Environmental Quality. 1986.
- Analyzed factors relevant to the feasibility of a sewage treatment plan for the Keizer/Salem area. City of Keizer. 1985-86.
- Analyzed the service sector in Portland, determined the strengths and weaknesses of a business location relative to other cities, and identified a target list of service-sector industries that would find Portland attractive. Portland Development Commission. 1986.
- Provided an economic analysis associated with a proposed up-zoning of a site zoned for a neighborhood shopping center, based on consideration of existing land uses, existing zoning, and the current and expected needs of the community. Private client. 1985-86.
- Assisted in the development of a comprehensive land-use plan and implementing ordinances for the City of Keizer, Oregon, including analysis and forecasting for population, housing, employment, and economic development. City of Keizer. 1984-86.
- Served as staff to the Citizen's Rate Advisory Committee and prepared the Committee's final report, recommending goals and policies for economic development. Emerald People's Utility District. 1985-86.

- Advised the State of Idaho on management of the water resources of the Snake River Basin and the implementation of the Swan Falls Agreement. State of Idaho. 1985.
- Evaluated a mixed-use zone in the Whiteaker neighborhood. City of Eugene. 1984-85.
- Analyzed and forecasted the tourism market in Pacific Power and Light's service area. Private client. 1985.
- Performed a feasibility analysis on the expansion of an existing 18-hole golf course to 27 holes. Documented and projected the demand for golf, evaluated the City of Portland's ability to operate and finance additional debt, and analyzed its rates. City of Portland. 1985.
- Analyzed and forecasted the demand for column inches of advertising for a metropolitan newspaper, estimating the growth of new households and subscriptions. Private client. 1983-85.
- Analyzed three-new sources of tax revenues: taxing the gross receipts of parking, wholesale fuel distributors, and automobile sales dealers. Tri-County Metropolitan Transportation District. 1985.
- Evaluated the methods used by the U.S. Department of Energy to rank potential sites for nuclear waste repositories. Washington State, Joint Legislative Committee on Science and Technology. 1985.
- Analyzed the public uses and private-market demand for county property. Multnomah County, Oregon. 1984-85.
- Analyzed the cost of administering land-use changes and developed a system for setting fees that equitably allocates costs to applicants. Washington County, Oregon. 1984-85.
- Designed and supervised the administration of a survey of fishermen on the Swan River and other drainages to determine the value they place on recreational fishing. Montana Department of Fish, Wildlife, and Parks. 1983-84.
- Evaluated the environmental effects from energy development projects, estimating the value of the external costs and benefits accompanying the development of coal-fired or combustion-turbine power plants. Bonneville Power Administration, U.S. Department of Energy. 1983-84.
- Analyzed the economic, legal, and political implications of annexing a large tract of industrially-zoned land to the city. City of Troutdale, Oregon. 1983-84.
- Reviewed and critically evaluated an economic analysis of lease rates for submerged and submersible land. Oregon Division of State Lands. 1983-84.
- Established rates for future sewer services under the county's long-range capital development plan. Multnomah County, Oregon. 1983.
- Developed a method for evaluating which type of fringe benefits package would be most costeffective considering both the demographic characteristics of the workforce and the institutional structure of the employer. City of Portland, Oregon. 1983.
- Served as staff to the Citizen's Rate Advisory Committee; prepared the Committee's final report on a new rate structure for residential, commercial, and industrial customers; helped set goals for rate design; conducted a cost-of-service analysis. Emerald People's Utility District. 1983.

- Evaluated a range of financing techniques to increase the conservation of energy among commercial users. City of Eugene. 1982-83.
- Formulated the evaluation program for a HUD-funded grant used to provide low-interest loans to business for energy conservation measures. Lane County Housing Authority and Community Services Agency. 1982-83.
- Prepared a financing plan for the Central County Service District; evaluated innovative financing mechanisms for funding the construction of a sewer system for East Multnomah County. Multnomah County. 1982-83.
- Designated an economic development strategy for the City of Forest Grove. City of Forest Grove. 1982-83.
- Reviewed the financial stability of one of an educational organization's member institutions, projected future revenues and expenditures, and made recommendations about the organization's continued funding of the institution. Private client. 1983.
- Estimated the potential fiscal impacts of a proposed state lottery on the earnings of the Oregon Common School Fund. Oregon Division of State Lands. 1983.
- Conducted a cost-benefit analysis of management options for mitigating the threat of flooding in the Toutle/Cowlitz watershed, which was damaged by the eruptions of Mt. St. Helens. Cowlitz County Department of Community Development. 1982-83.
- Analyzed six prototypical neighborhoods to determine how the market would respond to new commercial zoning regulations. City of Seattle. 1982.
- Forecasted the demand for coal in the Pacific Northwest, California, and Pacific Rim Countries, concentrating on the demand for steam and coal by electric utilities throughout the Western United States. Private client. 1980-82.
- Analyzed the fiscal and economic impacts of alternative proposals for offering relief to firms holding contracts for state timber. Oregon Land Board. 1982.
- Advised the City Manager on the implications of regional energy policies and helped the city develop appropriate responses to the regional policies. City of Eugene. 1981-82.
- Analyzed the system of charges imposed on the City by the municipal utility for installing over-sized water mains to ensure adequate water service for fire protection. City of Eugene. 1981-82.
- Evaluated policies to protect the water quality of the Rathdrum Prairie Aquifer from septic effluent resulting from indiscriminate development. Panhandle Health District, Kootenai County, Idaho. 1981-82.
- Evaluated the past and current applications of economic theory to water resource management in the Columbia River Basin, assessed the effects of such policies on anadromous fish populations. Bonneville Power Administration, Northwest Resources Information Center. 1981-82.
- Developed socioeconomic criteria to measure direct and indirect benefits of hydroelectric projects. Montana Department of Natural Resources and Conservation. 1981-82.
- Developed recommendations for the State of Montana concerning its use of investment funds for in-state economic development. Northern Rockies Action Group. 1981-82.

- Predicted the demand for housing in downtown Portland using sources of housing statistics and a statewide econometric model. Portland Development Commission. 1981-82.
- Developed a reliable model for predicting future trends in 18 non-wood manufacturing industries. Lane County. 1981.
- Identified and evaluated an exhaustive list of methodologies for assessing the environmental costs and benefits for acquisitions. U.S. Department of Energy, Bonneville Power Administration. 1981.
- Assessed changes in housing demand and supply for the area and simulated future changes for the period 1980-2000. West University Neighborhood of Eugene. 1981.
- Researched and reported on the locational criteria of high-technology firms in the Eugene-Springfield area. City of Eugene. 1981.
- Identified the transportation problems in the Vancouver, Washington-Portland, Oregon corridor, isolated their causes, recommended solutions and the institutional and financial arrangements for implementing the solutions. Bi-State Task Force (Cities of Portland and Vancouver, Counties of Multnomah and Clark, Metropolitan Service District, Oregon Department of Transportation, Washington Department of Transportation) and the U.S. Department of Transportation. 1980-81.
- Wrote the economic element of a draft environmental impact statement, which included estimates of the economic and land-use impacts of a proposed rapid transit system in the western Portland metropolitan area. Metropolitan Service District, Portland, Oregon. 1981.
- Described the fiscal impacts of proposed urban development on the county and ten special districts, and analyzed the financing mechanisms available to mitigate those impacts. Washington County, Oregon. 1981.
- Prepared a land-use, fiscal-impact, and feasibility analysis of a proposed light-rail system in Washington County, Oregon (in the Portland SMSA). Washington County, Metropolitan Service District (Portland), and U.S. Department of Transportation. 1980.
- Developed a five-year fiscal action plan for Multnomah County, Oregon (in the Portland SMSA), including specifying and simulating the major alternative approaches available to the County for facing its fiscal problems. Multnomah County. 1980.
- Specified and evaluated alternative programs for encouraging mixed-use districts. City of Eugene. 1980.
- Assisted in devising and evaluating alternative policies of airshed management that accommodate anticipated future economic growth. Portland Interstate Air Quality Maintenance Area. 1979'80.
- Analyzed the impacts of Montana's CETA program on its participants, developed models of the factors influencing the program's effectiveness, and trained the program's administrators in interpreting the models to improve the program. Montana Governor's Employment and Training Council, with a grant from the U.S. Department of Labor. 1979-80.
- Prepared a grant application for a transit mall in Eugene under the Urban Initiatives Program of the U.S. Urban Mass Transit Administration. Lane Transit District, City of Eugene, Oregon. 1980.

- Identified and evaluated the locational criteria of the high technology firms based in Santa Clara County, California. Private client. 1980.
- Forecasted and evaluated the likely economic consequences of alternative air-quality strategies in the Portland interstate Air Quality Maintenance Area. City of Portland, U.S. Environmental Protection Agency. 1979-80.
- Estimated the likely increases in storm water run-off that would result from future urbanization and changes in land use. City of Eugene.
- Described and evaluated alternative programs for promoting downtown housing in a sample of four U.S. cities. City of Eugene, Oregon. 1980.
- Prepared a work program for a market analysis of Blair Neighborhood's commercial revitalization. City of Eugene, Oregon. 1980.
- Defined the objectives of the 19 Statewide Planning Goals, identified inconsistencies among them, and described a methodology for specifying and quantifying program objectives in a way which would allow them to be evaluated. Oregon Land Conservation and Development Commission. 1979-80.
- Described and evaluated alternative growth-management programs in a sample of nine U.S. cities. City of Eugene, Oregon. 1979-80.
- Prepared a cost-revenue analysis of the acquisition of land surrounding Mahlon Sweet Airport for the purpose of minimizing land-use conflicts with the airport. Mahlon Sweet Airport and the City of Eugene, Oregon. 1979-80.
- Developed a short- and long-run evaluative framework for the Oregon Coastal Management Program. Department of Land Conservation and Development. 1979.
- Analyzed the potential for a large West-Coast construction firm to secure constructionmanagement contracts for public-sector construction projects, and developed a marketing strategy for the firm. 1979.
- Analyzed the feasibility of a proposed major commercial-industrial park in Eugene. Private client. 1979.
- Surveyed and inventoried the commercial and recreational boat launching and moorage facilities in Oregon's estuaries, and forecasts of the future demand for such facilities, based on models of commercial and recreational fishing effort and boat ownership. Oregon Department of Land Conservation and Development. 1979.
- Analyzed the market for rental and multifamily housing in the central area of Eugene. Eugene Planning Department. 1978-79.
- Developed forecasting models of demand for mineral aggregates for Oregon and for the market areas centered in Portland, Lincoln County, Medford and Ashland, Umatilla County (Pendleton, Umatilla, and Boardman), Deschutes County (Bend), and the Willamette National Forest. Oregon Department of Geology and Mineral Industries and the U.S. Army Corps of Engineers. 1978-79.
- Analyzed Eugene's economy, with special emphasis on developing an economic management process for implementing the City's economic policies relating to industrial and commercial activity, land use, and the unemployed and economically disadvantaged. City of Eugene, Oregon. 1978.

- Analyzed housing markets, matching and forecasting housing prices and household incomes in the Eugene-Springfield Metropolitan Area. Private client. 1978.
- Prepared a program for revitalizing the downtowns of Spooner and Medford, Wisconsin, as part of the American Institute of Architects' Regional/Urban Design Assistance Team. The Wisconsin Northwest Regional Planning Commission and the Upper Great Lakes Regional Commission. 1978.
- Estimated the effects of the City of Beaverton's building moratorium on homebuilders and households in and around Beaverton, Oregon. The Oregon State Homebuilders Association and the Portland Metropolitan Homebuilders Association. 1978.
- Prepared the economic elements for the comprehensive land-use plans of Lincoln County, Newport, Lincoln City, Toledo, Waldport, Siletz, and Depoe Bay. Lincoln County Planning Department, with a grant from the Oregon Department of Land Conservation and Development. 1978.
- Described the nature and location of unemployment in Lane County. Lane Council of Governments. 1978.
- Analyzed Eugene's housing markets by type, tenure, and location; and analyzed the underlying supply and demand conditions for residential land in Eugene, Springfield, and the balance of the Metropolitan Area. City of Eugene. 1978.
- Estimated the effects of Lane County's land-use and other regulations on the supply and costs of land and housing in Lane County and developed a system for monitoring, evaluating, and controlling these effects. The Lane County Planning Division. 1977-78.
- Evaluated the effectiveness with which the West Eugene Industrial Area could expect to accommodate future industrial activity, and recommended methods for revitalizing the area and for establishing a vehicle for economic development. City of Eugene. 1977-78.
- Estimated the effect of Eugene's Urban Service Boundary; developed a system for monitoring, evaluating and managing Eugene's growth. Eugene Planning Department. 1976-78.
- Analyzed the single-family and multiple-family housing markets in Eugene, including an estimation of current and forecasts of the future housing by type, tenure, and location in Eugene, and analyzed the underlying supply and demand conditions for residential land in Eugene, Springfield, and the balance of the Metropolitan Area. City of Eugene, Oregon. 1977.
- Prepared a work program and evaluation of the Permit System Improvement Projects in Portland, Salem, Eugene, and the State of Oregon. Oregon Executive Department, Intergovernmental grant from the U.S. Department of Housing and Urban Development. 1977.
- Prepared the economic element for Marion County's Comprehensive Plan. Marion County, Planning Department, with a grant from the Oregon Department of Land Conservation and Development. 1976-77.
- Evaluated the performance of the employment and training programs for adults in Jackson and Josephine Counties, Oregon. Jackson-Josephine Job Council with a grant under Title I of the comprehensive Employment and Training Act. 1977.
- Developed a process to increase the efficiency of the local labor markets in Gilliam, Grant, Morrow, Umatilla, and Wheeler Counties, and evaluated the performance of the District

- 12 COG's Employment and Training Program. East Central Oregon Association of Counties, the Oregon Employment Division, and the U.S. Department of Labor. 1977.
- Estimated the current and forecasted future employment in Eugene, Springfield, and the balance of the Metropolitan Area, by sector and location, and analyzed the underlying supply and demand conditions for commercial and industrial land in Eugene. City of Eugene, Oregon. 1977.
- Feasibility analysis of the rehabilitation of the old St. Charles Hospital, Bend, Oregon.

 Economic Development Administration, U.S. Department of Commerce (Project No. 08-06-01776).

 1976-77.
- Evaluated the performance of the Greater Portland Convention Association and the Portland Chamber of Commerce, Convention Bureau, Portland, Oregon. Greater Portland Convention Association. 1976-77.
- Analyzed the impact of zoning on land use in Portland and forecasted the demand and supply conditions of industrial land in Portland, Oregon. Portland Bureau of Planning; Economic Development Association, U.S. Department of Commerce. 1976.
- Prepared work programs for a study of the economies of Linn and Benton Counties and of Lincoln County. Planning Departments of Linn, Benton, and Lincoln Counties, Oregon. 1976.
- Preliminary feasibility analysis of a residential, office, and retail development in Eugene. Private client. 1976.
- Evaluated and reorganized Ashland's Comprehensive Plan; developed evaluative criteria for land-use planning in Ashland, Oregon. City of Ashland. 1976.
- Feasibility analysis of a 1200-room convention center in Downtown Portland. Convention Centers, Inc., Portland, Oregon. 1975-76.
- Evaluated the performance of the Youth Work Experience Program in Jackson and Josephine Counties, Oregon. Jackson-Josephine Job Council, Medford, Oregon, with a grant under Title I of the Comprehensive Employment and Training Act. 1975-76.
- Evaluated proposed comprehensive plans for the Camp Sherman Area and for Culver City in Jefferson County, Oregon. Planning Department of Jefferson County. 1976.
- Analyzed economic impact of a proposed K-Mart development on the Salem business community, Salem, Oregon. Salem City Council. 1976.
- Economic impact assessment: geological hazards; fish and wildlife; beaches and dunes; agriculture, forest, urban; historical and archaeological; continental shelf resources; estuary and wetland resources; visual values; freshwater resources, shoreland resources; general policies. Oregon Coastal Conservation and Development Commission. 1975.

EXPERT TESTIMONY IN TRIAL

Provided testimony and evaluated the economic impacts to municipalities in Alaska of the oil spilled from the Exxon Valdez. Stoll, Stoll, Berne, Lokting, Shlachter. Portland, Oregon. 2000-ongoing.

- Provided testimony and conducted an analysis of the defendant's claims of damages and critiqued these claims in testimony at trial. The dispute concerned a rental agreement for city-owned commercial property. Eugene, Oregon: Harrang, Long, Gary, Rudnick. 2002-ongoing.
- Provided economic analysis and testimony for the South Tahoe Public Utility District, Whitelaw compared the costs and benefits associated with adding MTBE, ethanol, or alkylates to conventional gasoline in Northern California. Sacramento, California: Miller, Sher & Sawyer. 1999-ongoing.
- Researched the literature, evaluated the economic basis for antitrust claims in a franchise setting, and provided expert testimony to an arbitration panel evaluating antitrust and tying claims related to the cedar home market. Seattle, Washington: Cutler & Nylander. 2000-2001.
- Provided economic analysis and testimony regarding the estimated impacts suffered by an oyster grower as a result of the grounding of the New Carissa. San Francisco, California: Davis Wright Tremaine. 2000-2001.
- Provided economic analysis and testimony regarding the estimated economic damages to an irrigator resulting from sewage pollution in the South Umpqua River. Roseburg, Oregon: Dole, Coalwell, Clark, Mountainspring & Mornarich. 1998.
- Provided economic analysis and testimony regarding the hiring and pay for head coaches at Oregon State University and estimated economic loss from gender-based hiring. Eugene, Oregon: Walters, Romm, Chanti, & Dickens. 1997.
- Provided economic analysis and testimony regarding the lost profits from a patent infringement of an orbital sander by conducting surveys and econometric analysis. Portland, Oregon: Kolisch, Hartwell, Dickinson & McCormack. 1995-1997.
- Provided economic analysis and testimony regarding the estimated uncompensated expenses and lost profits in a contract dispute between a manufacturer of video lottery terminals and the Oregon State Lottery. Portland, Oregon: Davis, Wright, Tremaine. 1996.
- Provided economic analysis and testimony regarding the catalytic converter and recycling industries and estimated damages for the defendant. Eugene, Oregon: Luvaas, Cobb, Richards & Fraser. 1995-96.
- Presented economic testimony regarding antitrust liability and damages related to the wholesale markets for televisions. Portland, Oregon: Schwabe, Williamson, Wyatt. 1995.
- Testified regarding damages to a rose nursery from actions by a natural-gas utility. Eugene, Oregon: Luvaas, Cobb, Richards, and Fraser. 1995.
- Provided expert testimony regarding economic damages due to antitrust activity in the retail and wholesale markets for petroleum products. Anchorage, Alaska: Condon, Partnow & Sharrock. 1994-95.
- Provided economic analysis of and testimony on issues relating to relevant product and geography, the extent of power in the market for recreation equipment, and damages. Boise, Idaho: Clemons, Cosho and Humphrey. 1988-92.
- Provided testimony regarding whether a property purchase lease-back partnership was organized solely to generate reduced taxes, rather than economic profit for the partners. Oregon Department of Justice. 1991.

- Provided economic analysis and testimony regarding price discrimination and tied houses in the alcoholic beverage industry. Portland, Oregon: Schwabe, Williamson, Wyatt, Moore, and Roberts. 1987-1988.
- Provided analysis and testimony on the value of eight properties of real estate. Portland, Oregon: Hanna, Urbrikeit, Jensen, Goyak, and O'Connell. 1987-88.
- Provided analysis and testimony regarding the damages associated with alleged patent infringement. Portland, Oregon: Schwabe, Williamson, Wyatt, Moore, and Roberts. 1987.
- Provided regulatory policy analysis and testimony regarding irrigation rate discounts, and the adverse economic impact of higher electrical rates. Boise, Idaho: Lindsay, Hart, Neil, and Weigler. 1987.
- Provided analysis and testimony regarding the economy of Lincoln County for the years 1970-1986, with special emphasis on the variables of non-agricultural wage and salary employments; covered payrolls, restaurant and hotel payrolls, and total assessed true cash value. Lincoln City, Oregon: Lovejoy and Green. 1987.
- Provided economic analysis and testimony regarding the economy of Oregon and the auto industry in the early 1980s. Eugene, Oregon: Swanson and Walters. 1987.
- Provided economic analysis and testimony for a private utility regarding economic principles for efficient pricing of electricity sold to regulated utilities by independent producers. Boise, Idaho: Runft, Leroy, Stecher, Coffin, and Mathews. 1985-86.
- Provided economic analysis and testimony regarding a newspaper's alleged violation of antitrust laws with respect to the market for local printed advertising. Portland, Oregon: Gordon, Thomas, Honeywell, Malanca, Peterson, and Daheim. 1985
- Testified in a franchise dispute for Richard Fredricks, owner of Sundown Subaru in Multnomah County Circuit Court: State of Oregon. 1983.

Also testified in personal-injury and wrongful-death cases.

OTHER EXPERT ANALYSIS FOR LITIGATION

- Provided economic consultation on the market for health-care services in Southern Oregon. Schwabe, Williamson, & Wyatt. Portland, Oregon. 2000-2002.
- Evaluated the relevant product and relevant geography for hospital services in Southern Oregon. Reviewed plaintiff's' materials relating to economic damage claims. Portland, Oregon: Schwabe, Williamson, & Wyatt. 2000-ongoing.
- Provided an economic analysis of the U.S. market for cookie stamps. Portland, Oregon: Schwabe, Williamson, & Wyatt. 2001.
- Estimated the economic impacts of restricting a forest clearcut in the Carbon River Corridor Entrance to Mount Rainier National Park. Seattle, Washington: Washington Forest Law Center. 2000-2001.
- Estimated the costs of a potential fuel spill at the mouth of the Columbia River. Potential costs included direct costs (e.g. ship damage, lost fuel, human injury and death, and property), and indirect costs (damage to species, habitat, and industries, including tourism, recreation, and river transportation). Portland, Oregon: Haglund, Kirtley, Kelley & Horngren. 2000-2001.

- Estimated the appropriate sample size required to confirm key characteristics about CEC's phone pole population. Bend, Oregon: Karnopp, Petersen, Noteboom, Hansen, Arnett & Sayeg. 2000.
- Evaluated the likely effects of certain labor practices on the working conditions of workers in the reforestation industry. Eugene, Oregon: Oregon Law Center. 1999-2001.
- Estimating the socioeconomic impacts of a proposed petroleum-products pipeline across central Texas. Private client. Austin, Texas: George & Donaldson. 1999-ongoing.
- Estimated the economic impacts of unauthorized construction activity that damaged the Pueblo of Isleta's forest. Denver, Colorado: Kelly, Haglund, Garnsey & Kahn. 1999-2000.
- Studied the economic status of bands of Native American in northern Michigan. Michigan Attorney General. 1999.
- Determined the damages caused by two competitors who infringed on a patent for an invention used in the alarm and security industry. Private client. Portland, Oregon: Stoel Rives LLP. 1999.
- Evaluated the economic impacts of the proposed Cross-Cascade Pipeline on businesses, grain producers, and consumers. Portland, Oregon: Schwabe, Williamson & Wyatt. 1999.
- Estimated the damages in an employment discrimination suit. Portland, Oregon: Gordon Thomas Honeywell. 1998.
- Studied factors associated with teen smoking, including price elasticities, research and development expenditures by tobacco companies, and profits generated from cigarette consumption by underaged smokers. Hagens & Berman (States of Washington and Arizona), Golub Silver (State of Connecticut). 1997-1998.
- An analysis of economic loss suffered as a result of injury. Jamin, Ebell, Schmitt, & Mason. 1997-1998.
- Studied allegations of price-fixing in markets for agricultural commodities. Portland, Oregon: Tonkon Torp. 1997-ongoing.
- Evaluated unfair trade practices in the market for computer software. Eugene, Oregon: Butler, Burgott, Leslie & Stine. 1997-1998.
- Estimated economic damages for a class action law suit against an insurance company which retroactively denied coverage to accident victims many months after they had received costly treatment. Seattle, Washington: Hagens & Berman. 1996-1997.
- Estimated economic damages resulting from a breach of the 1991 Manufacturing Agreement and misappropriation of intellectual property, trade secrets and manufacturing tooling of vsi crusher parts. Portland, Oregon: Schwabe, Williamson & Wyatt. 1995-1997.
- Analyzed the economic well-being of seven bands of Chippewa in Minnesota and Wisconsin. Minnesota Attorney General's Office and the Department of Natural Resources. 1995-1997.
- Analyzed lost profits resulting from the improper implementation of a new area code by conducting a telephone survey of affected firms. Seattle, Washington: Hagens and Berman. 1996.
- Developed and administered a survey of auto parts salespersons to calculate the value of lost

- wages. Eugene, Oregon: Hoag, Garrettson, Goldberg & Fenrich. 1995-1997.
- Analyzed the relevant product and geographic markets for video superstores. Portland, Oregon: Davis, Wright, Tremaine. 1995-1996.
- Analyzed the economic costs and benefits of differential tax treatment between in-state and out-of-state insurance companies by the State of Oregon. Eugene, Oregon: Harrang Long. 1995.
- Analyzed emissions of CO₂, mercury, fine particles, and other air contaminants associated with electricity generation. Chicago, Illinois. Environmental Law and Policy Center. 1995.
- Testified regarding the relevant geographic market for retail electronics for the 1970s and 1980s in Oregon. Portland, Oregon: Tonkon, Torp. 1995.
- Described the relevant product market for lumber mill equipment in the U.S. and Canada, Portland, Oregon. Kolisch, Hartwell, Diekinson, McCormack and Heuser. 1994-95.
- Provided expert analysis on class certification and economic damages for area businesses and property owners affected by airborne toxic pollutants. Seattle, Washington: Riddell, Williams, Bullitt & Walkinshaw. 1993-1995.
- Analyzed the economic analysis in the Spotted Owl Final Supplemental Environmental Impact Statement. Seattle, Washington. 1994.
- Provided expert analysis regarding the value of damages to municipalities suffered as a result of the Exxon *Valdez* oil spill and cleanup. Kodiak, Alaska: Jamin, Ebell, Bolger & Gentry. 1990-94.
- Provided expert testimony on class certification and conducted economic analyses for area businesses and property owners affected by a toxic spill in the Sacramento River. San Francisco, California: Lieff, Cabraser and Heimann. 1992-94.
- Analyzed impacts and damages for the various classes of plaintiffs' (e.g., fishermen and municipalities) as a result of the Exxon *Valdez* oil spill in Alaska. 1990-1995.
- Analyzed economic impacts of a chemical spill in Lake Superior on municipal government, City of Superior. 1993
- Provided expert analysis related to class certification and damages to property values from airport noise. Seattle, Washington: Hagens and Berman. 1992-1993.
- Constructed an hedonic price model of the market for vacant commercial and industrial land in King County, Washington. Seattle, Washington: Betts, Patterson & Mines. 1992-93.
- Analyzed the market for group dental insurance in Oregon and evaluated claims of antitrust liabilities and damages. Portland, Oregon: Schwabe Williamson. 1992-93.
- Provided economic analysis of issues relating to relevant product market and relevant geographic market for neonatal-prenatal medicine. Eugene, Oregon: Calkins and Calkins. 1989-92.
- Assessed the extent to which the Bureau of Land Management failed to satisfy the economic requirements for an exemption to the Endangered Species Act in its proposal to log timber in habitat for the northern spotted owl. Portland, Oregon: U.S. Department of Interior, Fish and Wildlife Service. 1991-92.

- Determined the extent to which the behavior of an association of river pilots operating under the provisions of an association of a state regulatory authority constituted an antitrust violation. Portland, Oregon: Haglund and Kirtley. 1991-92.
- Evaluated and recommended actions for improving the analysis underlying Washington's system for determining child-support payments. Seattle, Washington: Betts, Patterson & Mines. 1991.
- Provided expert analysis and testimony regarding the economic impacts of certain injunctions on forest service timber sales in Washington, Oregon and northern California. Seattle, Washington: Sierra Club Legal Defense Fund. 1991.
- Assessed the feasibility of a public agency's plan to condemn property and construct a hotel, thereby displacing planned private-sector development of a smaller hotel on the same site. Portland, Oregon: Pfister and Tripp. 1991.
- Valued damages resulting from patent infringement by a competitor of a manufacturer of agricultural equipment who also made and sold similar, non-infringing equipment. Portland, Oregon: Schwabe, Williamson and Wyatt. 1991.
- Analyzed the demand for recreational fishing in the Flathead Lake region in a dispute over the state's authority to regulate fish and game on an Indian reservation. Attorney General's Office, State of Montana. 1990.
- Provided economic analysis, with specific emphasis on the issues of relevant market, barriers to entry, and competition, of the market for maraschino cherries. Portland, Oregon: Tonkon, Torp, Galen, Marmaduke & Booth. 1990.
- Described the importance of the apple industry to Chelan County, Washington and estimated the likelihood that randomly-selected jurors will have a direct or indirect financial interest in the apple industry. Hoquiam, Washington: Stritmatter, Kessler and McCauley. 1989.
- Provided economic analysis of the savings proposed by a private corporation to the Defense Logistics Agency. Boise, Idaho: Runft, Leroy, Coffin, and Mathews. 1985-1988.
- Provided economic analysis regarding claims that a natural gas pipeline corporation violated antitrust laws in its interpretation and application of pipeline deregulation rules of the Federal Energy Regulatory Commission. Salt Lake City, Utah: Watkiss & Campbell. 1988.
- Provided economic analysis regarding a claim by a roller-bearing manufacturer that a rockcrusher manufacturer violated antitrust laws by attempting to restrict after market sales of replacement roller bearings to crusher users. Pittsburgh, Pennsylvania: Springer, Bush, & Perry. 1988.
- Provided economic analysis and testimony regarding a claim that the sale of television rights for professional bowling violated antitrust laws. Seattle, Washington: Hansen, Robinett & Krider. 1988.
- Analyzed the economic impacts of a hostile takeover of Farmers Insurance by the British American Tobacco Company. Portland, Oregon: Lindsay, Hart, Neil, & Weigler. 1988.
- Provided economic analysis for a school board during labor negotiations. Eugene, Oregon: 4J School District. 1987.

- Reviewed plaintiffs appraisal of damages for appropriateness of method and amount for dependents' (countersuit) damages incurred resulting from breach of contract. Bend, Oregon: McCord & Haslinger, 1986.
- Analyzed the present discounted value of damages incurred by a private corporation under an alleged restrictive settlement. Eugene, Oregon: Perrin, Gartland and Doyle. 1984-86.
- Provided economic analysis regarding a claim that a manufacturer of Mexican coffee liqueurs exercised monopoly power to exclude or restrict competition in the market. Schwabe, Williamson, Wyatt, Moore & Roberts. 1985-86.
- Provided economic analysis of the present discounted value of alleged damages sustained by Chrysler Corporation resulting from the action of two franchises. Seattle, Washington: Betts, Patterson, and Mines. 1986.
- Assisted Multnumah County in their labor arbitration with corrections officers. 1985-86.
- Provided economic analysis regarding an alleged restraint of trade for the sale and transportation of fly ash. Stoel, Rives, Boley, Fraser & Wyse. 1985-86.
- Provided economic analysis regarding real estate markets and financial conditions in Ada County and the City of Boise. Boise, Idaho: Clemons, Cosho, and Humphrey. 1985.
- Assessed the impact of the City of Ketchum's annexation of the Northwood Subdivision on the Ketchum Springs Water Supply Company's revenues, rate base, capital structure, customers, and stockholders. Private client. 1984-85.
- Provided economic analysis regarding a claim that a video-game manufacturer violated antitrust laws with respect to the distributorship of video games. Seattle, Washington: Betts, Patterson, and Mines. 1985.
- Analyzed relevant geographic markets for housing in Boise and Ada County. Private client. 1984-85.
- Analyzed the disparities between procedures for determining taxable value for residential properties and those for commercial and industrial properties. Developed expert testimony on the reliability and validity of statistical techniques used in calculating ratios of assessed to market values. Montana Department of Revenue. 1983-84.
- Provided economic analysis regarding a claim that the members of a medical clinic violated antitrust laws by using the peer-review process to restrict a competing surgeon's hospital privileges. Astoria, Oregon: Tonkon, Torp, Galen, Marmaduke, and Booth. 1984.
- Provided economic analysis and calculation of damages regarding a newspaper's alleged violation of antitrust laws with respect to the market for local printed advertising. Boise, Idaho: Risch, Goss, Insinger, and Sallady. 1984.
- Provided a condemnation appraisal for the Oregon Department of Justice in Umatilla County Circuit Court. State of Oregon. 1984.
- Provided analysis and testimony regarding damages associated with a contract dispute from the loss of a lease and additional travel costs when defendant failed to vacate a space as promised. King County, Washington: Betts, Patterson, and Mines. 1984.
- Provided business valuation for John McInnis and Rhodes Big O Tires, Inc. Mountain Home, Idaho: Hall and Friendly and the C.P.A. firm McMurtrey and Company. 1984.

- Analyzed the disparities between procedures for determining taxable value for residential properties and those of commercial properties. Montana Department of Revenue. 1982-83.
- Provided business valuation representing Robert Hammons & Associates in U.S. District Court, Idaho: Stephen, Slavin, Kvanvig, and Stephan. 1983.

OTHER EXPERT TESTIMONY

- Presented oral testimony (via telephone) to the Oregon Senate Economic and Job Stimulus Committee, regarding an overview of Oregon's economy. December, 2001.
- For Earthjustice, ECO prepared a declaration on the economic issues of critical habitat designation for endangered salmon. Seattle, Washington: Earthjustice Legal Defense Fund. 2001-ongoing.
- Provided economic analysis and testimony regarding the economic impacts of a proposed sand-and-gravel mine on surrounding farms. Private client. Eugene, Oregon: Bahr & Stotter. 2000-2002.
- Evaluated the economic impacts of bypassing four Federal dams on the Lower Snake River, developed a plan to mitigate the negative consequences of the bypass, and testified on these topics before the House Subcommittee on Fisheries Conservation, Wildlife and Oceans, and the Subcommittee on Water and Power. Portland, Oregon: Trout Unlimited and Earthjustice Legal Defense Fund. 1999.
- Provided oral testimony at an Antitrust Immunity Hearing regarding a petition seeking antitrust immunity for a proposal to integrate health-care providers. Vancouver, Washington: Reed, McClure. 1995.
- Testified before the Portland City Council regarding the proposed location of a Costco retail store in the Industrial Sanctuary of Portland, Oregon. Portland, Oregon. Kell, Alterman. 1995.
- Testified regarding the 1872 Mining Law, U.S. Senate Committee on Energy and Natural Resources, Washington, DC: 1995
- Testified on resource management issues in the West. U.S. Senate Subcommittees (Environmental Protection, Environment and Public Works), Washington, D.C. 1993 and 1995.
- Testified before the New Mexico Horizons Task Force on Strategic Thinking in Oregon and Utah. Santa Fe, New Mexico. 1994.
- Testified before the Committee on Natural Resources House of Representatives on Changing Needs of the West. Salt Lake City, Utah. 1994.
- Testified on the impacts of reduced timber harvest in the Tongass National Forest on the economy of southeast Alaska. Sierra Club Legal Defense Fund. Anchorage, Alaska. 1994.
- Provided analysis and testimony to the Oregon State Legislative Joint Committee on Forest Products and developed a strategic plan for allocating state resources to assist dislocated workers and timber-dependent communities and a set of legislative recommendations for implementing the plan. Salem, Oregon. 1990.